Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Unbundled Access to Network Elements	)	WC Docket No. 04-313
	)	
Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers	)	CC Docket No. 01-338

COMMENTS OF THE NORTH CAROLINA UTILITIES COMMISSION

Robert H. Bennink
Chief Counsel

The North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

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I. BACKGROUND

The North Carolina Utilities Commission (NCUC) respectfully submits these comments in response to the Federal Communications Commission's (FCC's) August 20, 2004 *Order and Notice of Proposed Rulemaking* (*August 20, 2004 Order and NPRM*) soliciting comments on final unbundling rules that will implement the obligations of Section 251(c)(3)[1] of the Communications Act of 1934, as amended, *inter alia*, by the Telecommunications Act of 1996 (the Act or TA96), in a manner consistent with the March 2, 2004 decision of the U.S. Court of Appeals for the District of Columbia Circuit (DC Circuit) in *United States Telecom Ass'n v. FCC* (*USTA II*).

Specifically, the NCUC files these comments in response to Paragraph 15 of the *August 20, 2004 Order and NPRM* wherein state commissions were encouraged to "file summaries of the state proceedings, especially highlighting factual information that would be relevant under the guidance of *USTA II*." The FCC further directed that "parties must provide a complete recitation in their current filings of any arguments or data that they wish the Commission to consider."

[1] Section 251(c)(3) requires incumbent local exchange companies (ILECs) to provide to requesting telecommunications carriers "nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and section 252."

II. NCUC PROCEEDINGS

On August 21, 2003, the FCC released the *Triennial Review Order* (*TRO*). In response to the *TRO*, by Order dated September 11, 2003, the NCUC established two separate dockets:

(1) Docket No. P-100, Sub 133p to consider the impairment of DS1 enterprise customers, and

(2) Docket No. P-100, Sub 133q (Main Proceeding) to consider the balance of matters to be addressed by the NCUC pursuant to the *TRO* within the 9-month time frame set out by the FCC.

Due to the limited time available for NCUC review of impairment of DS1 enterprise customers, the NCUC noted that the proceeding would be conducted on the pleadings by way of Petition, Comments, and Reply Comments. On September 30, 2003, in Docket No. P-100, Sub 133p, the NCUC issued its *Order Finding No Impairment and Closing Docket Without Further Action to Rebut FCC National Finding*. In its *Order*, the NCUC stated that

> [b]ased on the statements of the three largest ILECs[2] providing service in North Carolina, the Commission finds that the provision of DS1 loops in

[2] The three largest ILECs include BellSouth Telecommunications, Inc. (BellSouth), Carolina Telephone and Telegraph Company and Central Telephone Company (collectively known as Sprint), and Verizon South, Inc. (Verizon).

combination with unbundled local switching is *de minimis*. The limited demand for this service leads the Commission to conclude that CLPs are not impaired when not provided with access to unbundled local switching for enterprise business customers served through high-capacity loops. Therefore, the Commission hereby determines that it will not file a petition with the FCC to rebut the FCC's impairment finding and it will not undertake any further investigation in this docket.

On October 22, 2003, the NCUC issued its *Procedural Order*. In the *Procedural Order*, the NCUC:

(1) Renamed Docket No. P-100, Sub 133q to address the continued availability of unbundled local switching for the mass-market (or the unbundled network element platform (UNE-P) case), and

(2) Created Docket No. P-100, Sub 133s to address the continued availability of unbundled high capacity transport on certain routes and unbundled high capacity loops at certain customer locations (or the high capacity loop and transport case).

Further, in the *Procedural Order*, the NCUC set an evidentiary hearing to begin in Docket No. P-100, Sub 133q (UNE-P) on March 22, 2004, and set an evidentiary hearing to begin in Docket No. P-100, Sub 133s (high capacity loop and transport) upon

the conclusion of the hearing in Docket No. P-100, Sub 133q. The NCUC further outlined a schedule for prefiled direct testimony, rebuttal testimony, and surrebuttal testimony. The NCUC instructed parties to file executive summaries of their testimony. Copies of the executive summaries are attached, hereto, as **Appendix A**. Finally, the NCUC detailed the rules governing discovery in the dockets. The NCUC scheduled initial briefs and/or proposed orders to be filed in Docket No. P-100, Sub 133q on April 7, 2004 and initial briefs and/or proposed orders to be filed in Docket No. P-100, Sub 133s on April 23, 2004.

Verizon notified the NCUC by letter filed on October 31, 2003 that it would not actively participate in the NCUC's *TRO* proceedings.

The parties conducted extensive discovery in these two dockets. The NCUC held two conference calls with the parties to address discovery matters.

On November 25, 2003, the NCUC issued its *Order Amending October 22, 2003 Procedural Order*. In that *Order*, the NCUC amended its rules concerning discovery in the dockets.

The parties filed testimony in the dockets as follows:

Docket No.	Direct Testimony	Rebuttal Testimony	Surrebuttal Testimony
Docket No. P-100, Sub 133q	January 1, 2004	February 16, 2004	March 1, 2004
Docket No. P-100, Sub 133s	February 16, 2004	March 1, 2004	N/A

On March 2, 2004, the DC Circuit entered and released its opinion in *USTA II*. In response to *USTA II*, on March 4, 2004, the NCUC issued its *Order Allowing Comments* on *USTA II*. The NCUC allowed parties to file comments regarding whether to continue and hold in abeyance all proceedings in its pending dockets, including the hearing scheduled to begin on March 22, 2004, until all petitions for re-hearing and all appeals were exhausted.

On March 12, 2004, the NCUC issued its *Order Regarding Hearings*. The NCUC stated that it would proceed with the hearings in its *TRO* dockets on March 23, 2004 under revised terms. The NCUC noted that BellSouth Telecommunications, Inc. (BellSouth) and the Public Staff of the NCUC (Public Staff) had urged the NCUC in their comments to suspend and hold the proceedings in abeyance in light of the *USTA II* decision. The NCUC also noted that US LEC and the Competitive Carriers of the Southeast (CompSouth[3]) requested that the NCUC proceed with the hearings as scheduled.

The NCUC concluded in its *March 12, 2004 Order* that

> The arguments on both sides are nearly equally compelling. These arguments, combined with the current regulatory, judicial, and market

[3] CompSouth includes Access Integrated Networks, Inc., Access Point Inc., AT&T of the Southern States, LLC, Birch Telecom of the South, Inc., Cinergy Communications Company, CompTel/Ascent Alliance, Covad Communications Company, ITC DeltaCom Communications, Inc., IDS Telecom, LLC, KMC Telecom III, KMC Telecom V, Inc., LecStar Telecom, Inc., Momentum Business Solutions, Inc., Network Telephone Corp., NewSouth Communications, Corp., Nuvox Communications, Inc., PACE Coalition, Talk America, MCImetro Access Transmission Services, LLC, MCI WorldCom Communications, Inc., Xspedius Management Co., LLC, and Z-Tel Communications, Inc.

uncertainty, render this procedural decision extraordinarily difficult. The dilemma is exacerbated by the sharp split among members of the FCC, both as to the substantive merits of the *TRO* itself and as to the procedural path that should be followed in the wake of the Court's decision. The highly-charged differences among these bright people of good will as to how the law should be interpreted in the public interest mirror the national clash of conflicting positions and signal the importance and difficulty of the underlying policy and legal issues. . . . Thus, the Chair is persuaded that good cause exists to proceed with the hearings under the terms announced herein. Holding such hearings will be an efficient use of time for both the Commission and the parties, who have already prepared their case and put a great deal of time and effort in meeting the stringent deadlines imposed by the Commission's October 22, 2003 Procedural Order. . . . The views in which we are particularly interested include the parties' positions regarding the requirements and effects of the *TRO*, the practical results and ramifications of the *USTA II* opinion, future expectations related to resolution of any *USTA II* appeals, and other matters which may involve *TRO*-related issues that may come before the Commission prior to final resolution of *USTA II* and the *TRO.* Finally, and of equal importance, the Chair believes that these hearings should help inform the Commission as to the current status of competition in North Carolina's geographic markets and that such information will be valuable

to the Commission in exercising its authority regarding unbundling under N.C.G.S. § 62-110(f1) and § 271 of the Act. . . .

The NCUC held its hearing in Docket Nos. P-100, Sub 133q and Sub 133s on March 23, 2004. The NCUC entered the prefiled testimony submitted by the parties into the record; however, cross-examination was not allowed and, in fact, witnesses were not present. In total, the prefiled testimony of 32 witnesses was entered into the record in the NCUC's proceedings. The parties then addressed the NCUC with comments on their positions as to *TRO*-related matters and responded to questions from the NCUC.

The parties were instructed by the Presiding NCUC Commissioner to work cooperatively to agree upon the evidence to be entered into the record in our *TRO*-related dockets. In addition to the prefiled testimony of the 32 witnesses, the parties also agreed to enter portions of the related evidentiary records from similar proceedings held by the State Commissions in Florida and Georgia into the North Carolina record of evidence. At the conclusion of the March 23, 2004 hearing, the Presiding Commissioner recessed the hearing and held the dockets in abeyance pending further order of the NCUC.

The only additional action that the NCUC has taken with respect to these dockets was a status conference in May 2004. In particular, by Order dated May 21, 2004, the NCUC scheduled a conference to discuss the general status of its *TRO*-related dockets

and to discuss matters raised by CompSouth in its letter to the NCUC dated May 17, 2004.

III. CONCLUSIONS

Since the NCUC did not proceed with its full evidentiary hearing in its *TRO*-related dockets after the *USTA II* decision, the NCUC does not have any factual information or analysis of such factual information to provide to the FCC concerning its *TRO*-related dockets. However, the NCUC believes that it is important to file these comments outlining its procedural history in the *TRO* dockets for the FCC's information.

Furthermore, by Order dated September 20, 2004, the NCUC has instructed the parties to its proceedings to coordinate with each other to file summaries of the NCUC's proceedings and to submit any materials developed for the proceedings that the parties wish to submit to the FCC for its consideration in its proceedings to craft unbundling rules that comply with *USTA II*. The NCUC instructed the parties to file their comments in accordance with the FCC's instructions and to avoid unnecessary duplicative filings. Further, the NCUC informed the parties that it would file this brief procedural summary of its *TRO* proceedings.

As a final note, the NCUC initiated a study on local telecommunications competition in the State in April 2004. The NCUC contracted with RTI International, Inc.

(RTI) to conduct the study. The NCUC anticipates that RTI will provide its final report to the NCUC by October 15, 2004.

The NCUC appreciates the opportunity to file these comments.

Respectfully submitted,
The North Carolina Utilities Commission

Robert H. Bennink, Jr.

Robert H. Bennink, Chief Counsel
The North Carolina Utilities Commission
430 North Salisbury Street
Raleigh, NC 27603-5918
(919) 733-3969
Email: bennink@ncuc.net

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APPENDIX A

EXECUTIVE SUMMARIES OF TESTIMONY

APPENDIX A
(Of NCUC's Comments)

APPENDIX A PROVIDES THE DIRECT, REBUTTAL, AND SURREBUTTAL MATRICES OF ISSUES AND EXECUTIVE SUMMARIES FOR THE WITNESSES WHO MADE SUCH FILINGS WITH THE COMMISSION IN ITS TRO PROCEEDINGS IN:

(1) DOCKET NO. P-100, SUB 133q: TRO → UNE-P, and

(2) DOCKET NO. P-100, SUB 133s: TRO → HIGH CAPACITY LOOP AND TRANSPORT.

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, LLC

(Docket No. P-100, Sub 133q: TRO → UNE-P)

The NCUC is Providing the Direct, Rebuttal, and Surrebuttal Matrices of Issues and Executive Summaries for the Following AT&T Witnesses:

Mark E. Argenbright – Rebuttal (2/16/04)
Jay M. Bradbury – Direct (1/9/04), Rebuttal (2/16/04), Surrebuttal (3/1/04)
Cheryl Bursch - Rebuttal (2/16/04), Surrebuttal (3/1/04)
John C. Klick - Rebuttal (2/24/04)
Steven E. Turner - Direct (1/9/04)
Mark Van de Water – Direct (1/9/04), Rebuttal (2/16/04), Surrebuttal (3/1/04)
Don J. Wood - Direct (1/9/04), Rebuttal (2/16/04), Surrebuttal (3/1/04)

AT&T COMMUNICATIONS OF THE SOUTHERN STATES LLC'S
MATRIX SUMMARY
DOCKET NO. P-100, SUB 133q

WITNESS	SUBJECT MATTER OF TESTIMONY	TRO DECISIONAL CRITERIA
Jay M. Bradbury	Local Circuit Switching	47 C.F. R. §51.319(d)(2)(iii)(A)
Steven E. Turner	Economic Barriers to CLEC Entry	47 C.F. R. §51.319(d)(2)(iii)(B)
Mark Van de Water	Hot Cut Processes	47 C.F. R. §51.319(d)(2)(ii)
Don J. Wood	Economic Barriers to CLEC Entry	47 C.F. R. §51.319(d)(2)(iii)(B)

EXECUTIVE SUMMARY OF THE DIRECT TESTIMONY OF JAY M. BRADBURY

The differences in the way end users' loops are connected to carriers' switches are among the most important factors that cause CLPs to face substantial operational and economic entry barriers when they seek to offer Plain Old Telephone Service ("POTS") to mass-market (residential and small business) customers using their own switches and ILEC-provided loops (i.e., *via* unbundled network element-loop or "UNE-L" facilities-based entry). Until these barriers are removed, the FCC's finding of impairment cannot be overturned.

The description of the differences between the incumbent local exchange company ("ILEC") legacy network architecture and emerging competitive local exchange carrier ("CLEC"), referred to as Competitive Local Providers ("CLP") in North Carolina, network architecture contained in my testimony provides a perspective and context from which all the issues to be considered in this docket may be viewed objectively. Accordingly my testimony:

- Compares the significantly different network architectures available to an ILEC and a CLP when each wishes to use an ILEC-owned analog voice-grade loop, also referred to as a DSO loop, to connect a mass market customer with its respective switch in order to provide POTS; and

- Provides an overview of the network architecturally-based operational and economic entry barriers to successful UNE-L facilities-based entry and identifies CLP witnesses who will provide more detailed testimony on the impact of those barriers and the fact that until the underlying local network architecture that has created these barriers is changed, CLPs will continue to face significant practical and economic impairments.

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The FCC has found on a national basis that CLECs are impaired in serving the mass market in the absense of ILEC switching (TRO 422, 429) and explains its finding by noting that:

> Competitive LECs can use their own switches to provide services only by gaining access to customers' loop facilities, which predominately, if not exclusively, are provided by the incumbent LEC. Although the record indicates that competitors can deploy duplicate switches capable of serving all customer classes, without the ability to combine those switches with customers' loops in an economic manner, competitors remain impaired in their ability to provide service. Accordingly, it is critical to consider competing carriers' ability to have customers' loops connected to their switches in a reasonable and timely manner. (TRO 429. Emphasis added.)

There are four key structural components that create this impairment. **First**, a CLP must incur the time and cost to install and maintain a significant "backhaul" network infrastructure to connect its switch to the ILEC loops that terminate in the ILEC's wire center, which may also be referred to as a central office ("CO") or local serving office ("LSO"), while the ILEC has no such need for backhaul facilities. As the FCC explained in the TRO, "The need to backhaul the circuit derives from the use of a switch located in a location relatively far from the end user's premises, which effectively requires competitors to deploy much longer loops than the incumbent". (TRO 480) These CLP backhaul costs include the non-recurring costs necessary to establish a collocation arrangement in every ILEC wire center in which the CLP wishes to offer mass market services, the recurring costs paid to the ILEC for maintaining these collocation arrangements as well as the transport equipment and facilities necessary to extend the ILEC's loops to the remotely located CLP switch.

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Second, a UNE-L CLP must aggregate traffic from many locations in order to achieve the same switch economies of scale realized by an ILEC at a single location. This forces the CLP to incur its backhaul cost disadvantage in many wire centers in order to achieve the type of switch scale economies that the ILEC achieves at a single wire center.

Third, the CLP must pay exorbitant charges to the ILEC for transferring loops from the ILEC switch to a CLP collocation facility, or from one CLP to another. This transfer process also forces the CLP's customers to suffer an inferior experience in converting to the CLP's service compared with the treatment they can receive using UNE-P, or that interexchange carriers -- including the ILECs -- can offer customers using the Primary Interexchange Carrier ("PIC") change process for allowing customers to change their long distance service provider.

Finally, the CLP is precluded from serving an entire segment of retail customers, those whose loops are currently served by integrated digital loop carrier (IDLC) systems, unless the ILEC has the spare non-IDLC loop plant in place to replace these customer's lines so that they are eligible for a UNE-L migration to a CLP.

Incumbent LEC networks were designed in a manner that enables them -- and no one else -- to maximize the efficiencies of both their loop and switching assets. This design provides them with substantially higher quality and lower costs compared to their potential competitors. Specifically, ILECs can connect their analog voice grade loops to their switches by using a simple jumper wire pair across the MDF in the customer's local serving office.

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ILECs were able to construct this type of network architecture because, as the historic monopolists, they supplied local telecommunications to all customers in their serving areas.

CLPs cannot maximize the combined efficiencies of both the ILEC loop plant and their own network infrastructure. Rather, in order to compete, they must take the ILEC loop plant as it exists and extend all of their customers' loops to their own switches, which are typically located a significant distance from the customer's serving office, a network architecture that is expensive and necessary. Accordingly, before a CLP can provide POTS service using its own switch and ILEC analog voice grade loops, it must:

> (1) engineer, establish and maintain a collocation, including the associated HVAC and power;
> (2) install and maintain digitization, concentration, and multiplexing equipment at its collocations, as well as related monitoring/testing and power distribution equipment; and
> (3) arrange for and provide transport between its collocation and its switch.

Each of these activities imposes additional costs and operational barriers on CLPs, costs that ILECs do not incur to offer the same service. The additional cost per line in North Carolina that such activities impose on CLPs represents significant, real costs not faced by incumbents that effectively foreclose CLPs from serving mass-market customers through the use of their own switches.

UNE-P has emerged as the entry method capable of and actually bringing competition to the mass market. UNE-P is an electronic service provisioning system that extends to the CLPs many of the same efficiencies and economies available in the ILEC network. UNE-L is not and cannot be made so through the implementation of "batch" hot cut processes and a

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pairing with "rolling access" neither of which, individually or collectively, eliminates any of the fundamental characteristics of the existing single user ILEC network. UNE-P works, and furthermore, benefits not only CLPs, but also the ILECs, and most importantly, the consumer, when compared to forced use of UNE-L.

Until the underlying local network architecture that has created these impairments is changed, CLPs will continue to face significant practical and economic impairments in serving mass market end-users on ILEC loops *via* their own switches—impairments that make UNE-P the only viable entry method for serving the mass market.

The critical issue of this proceeding is not whether CLPs can "deploy" their own switches. Instead, the critical issue upon which this Commission should focus is whether a CLP can "efficiently use" its own switch to connect to the local loops of end users. The differences in the way end users' loops are connected to carriers' switches are among the most important factors that cause CLPs to face substantial operational and economic entry barrier when they seek to offer POTS to mass-market (residential and small business) customers using their own switches and ILEC-provided loops (i.e., UNE-L facilities-based entry). Without fundamental changes to the way in which the ILECs permit CLPs to gain access to the consumers' loops, the impairment found by the FCC will continue and access to UNE-P must be preserved.

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Executive Summary

Direct Testimony of Steven E. Turner on behalf of AT&T

In the first two sections of the testimony, I provide my background and the purpose of the testimony. My testimony describes and quantifies the significant cost disadvantages that an efficient competitive local exchange carrier ("CLP") would confront in attempting to serve mass market customers if continued access to unbundled local switching and the unbundled network element platform ("UNE-P") were denied. My testimony demonstrates that in the absence of unbundled local switching, CLPs face practically insurmountable cost disadvantages relative to the Incumbent Local Exchange Carriers ("ILECs") if unbundled network element loops ("UNE-L") used in conjunction with their own (or a third party provider's) switching is the sole option for providing local services to mass market customers.

My testimony discusses the costs a CLP seeking to serve mass market customers using its own switches would incur for backhauling a customer loop from the ILEC central office to the CLP's switch (i.e., "backhaul costs") as well as attendant costs for transitioning the customer's service from the ILEC to the CLP (i.e., hot cut costs, number portability). The backhaul costs consists of (1) the cost of preparing the loop for transport out of the ILEC's central offices, and (2) the cost of transporting the traffic back to the CLP's switch location. In addition once this expensive backhaul infrastructure is deployed, the CLP must arrange for, and pay ILEC charges for a hot cut. My testimony focuses upon these components of the absolute cost disadvantages associated with this CLP "backhaul," and hot cut costs associated with connecting a customer's

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loop with the CLP switch which are highly significant and contribute to the impairment a CLP faces in using self-provided switches to serve mass-market customers.

The "impairment analysis tools" that underlie my testimony quantify these additional costs of loop connectivity incurred by CLPs, but not by the ILEC, if CLPs are required to *provide facilities-based mass-market local services* based upon a voice grade UNE-L architecture. The tools I use calculate the minimum level of cost disadvantage an efficient CLP would face. In order to provide the degree of "granularity" required by the FCC's order, the tools utilize data that is specific to BellSouth's operations in North Carolina.

Section III provides the background to my analysis and summarizes the results. Competitors will be impaired if, in the absence of unbundling, an efficient CLP would incur substantially higher costs than do the ILECs in order to self deploy the network facility in question. The substantially higher costs, which equate to an absolute cost disadvantage, analyzed in my testimony are created by differences in the basic characteristics of the network architectures employed by ILECs, on the one hand, and CLPs on the other. These differences in network designs result in difference costs to provide service to mass market customers for CLPs using UNE-L and ILECs. Costs to backhaul customer lines to the CLP switch, hot cuts to provision the migration of service to the CLP switch with limited service interruption, and number portability to maintain the customer's same telephone number are not faced by the ILEC.

Section IV of my testimony describes, in general terms, the tools that I relied upon to measure the CLPs' cost disadvantage and the analysis that has been undertaken for BellSouth-North Carolina LATAs using those tools. Because UNE-L entry requires CLPs to connect ILEC loops to their own switches, the forward-looking cost of such connections is central to any

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analysis of the economic viability of UNE-L as an entry strategy to serve mass-market customers. The DS0 Impairment Analysis Tools described in this section of my testimony compute the loop-related impairment costs of providing service that would be incurred by an efficient CLP using UNE-L that are *not* incurred by incumbents.

The DS0 Impairment Tools are a collection of spreadsheet models that calculate the cost associated with connecting a customer's loop that terminates in an incumbent's central office to a CLP's switch, and the associated customer acquisition costs. DS0 Impairment Tools calculate the costs that CLPs face in three broad categories: (1) preparation of the loop for transport from ILEC central offices (including DS0 equipment infrastructure and collocation); (2) backhaul transport between the ILEC's central offices and the CLP's switch; and (3) customer transfer costs for hot cuts and number portability.

The two major components of the costs of preparing loops for transport out of the ILEC's central offices are: (1) the cost of DLC and related equipment housed within the ILEC's central office (together with associated equipment at the CLP's central office) used to digitize, concentrate and multiplex the signals on the CLP's customers' loops, and (2) the CLP's cost to obtain collocation space in the ILEC's central office in which to place the DLC and related equipment.

The costs of connecting to the CLP's switch (backhaul infrastructure) are calculated by two of the spreadsheet models: (1) the Facility Ring Processor Tool, and (2) the Transport Cost Analysis Tool. The Facility Ring Processor Tool builds the transport ring and develops the distances between on-net locations and from satellite offices to on-net locations. The Transport Cost Analysis Tool determines the transport equipment and facilities that are required to

efficiently connect collocation arrangements where unbundled loops are collected back to the CLP switch. This tool essentially identifies the "backhaul" transport architecture that is needed to establish connectivity between a customer's loop that terminates in the ILEC's central office and a CLP switch.

The third major component of the CLP's economic impairment is the costs associated with transitioning customer loops from the ILEC to a CLP using UNE-L. This customer transfer is referred to in the industry as a "hot cut." In addition to the cost of hot cuts, the DS0 Impairment Analysis Tool calculates costs associated with (1) digital loop carrier equipment, (2) collocation, including space and power, (3) interconnection arrangements at the collocation and the CLP switching office, and (4) transport costs.

Finally, in Section V, I present the results for BellSouth in each LATA in North Carolina. The results demonstrate that CLPs cannot practically overcome the significant cost disadvantages identified in this study. Thus, the modeling results for the "hypothetical CLP" and actual market experience are entirely consistent: there currently is a notable absence of actual, broad based facility-based competition for mass market customers using voice grade UNE-L which corroborates the FCC's national finding of impairment for switching to serve mass market customers.

Executive Summary

Direct Testimony of Mark Van de Water

The purpose of my testimony is to address the operational constraints associated with the hot cut process, to describe issues this Commission should consider in developing any bulk migration process for unbundled loops, and to recommend the parameters that should be included in any bulk migration process. My testimony covers four key areas in this proceeding.

First, I address the operational and economic barriers presented by the hot cut process, by which customers are migrated to a CLP-owned switch using an Incumbent Local Exchange Carrier ("ILEC") loop (also referred to as an Unbundled Network Element-Loop or "UNE-L" hot cut). This section of my testimony explains the findings of the Federal Communications Commission ("FCC") in the Triennial Review Order ("TRO").[1] It summarizes the FCC's conclusions that competitive carriers are impaired without access to unbundled local switching as a result of economic and operational impairment due to the hot cut process and describes the FCC's directions to state commissions to approve and implement a batch loop migration process.

Second, I describe the specifics of the current hot cut process and AT&T's unsatisfactory experience with hot cuts in the BellSouth region. My testimony summarizes why AT&T's experience led it to choose the Unbundled Network Element-

[1] *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking*, In the matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Federal Communications Commission, CC Docket No. 01-338, Released August 21, 2003 (hereafter referred to as the "Triennial Review Order" or "TRO")

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Platform ("UNE-P") to provide local service and describes specific concerns related to BellSouth's performance of hot cuts.

Third, I describe the challenges that must be addressed in implementing any batch loop migration process. I address the volume of hot cuts that will be required and the evaluation standards by which any batch migration process should be considered. My testimony discusses the number of UNE-L hot cuts that should be expected if unbundled local switching is no longer available and the segments of the market that pose unique challenges for development of a bulk migration process. My testimony also addresses new operational constraints that will arise if customer conversions require migration of a loop because unbundled local switching is no longer available to Competitive Local Exchange Carriers ("CLPs").

Fourth, my testimony includes, at pages 59-63, recommendations for a batch hot cut process. Because CLPs have restricted insight into the operations of the ILEC, these detailed recommendations address the parameters of a reasonable batch migration process. Development of a batch hot cut process rests primarily with the ILECs, in cooperation with the CLPs. Further, while my testimony points out the advantages of its recommended process, it also illustrates why no manually based process is capable of ensuring the seamless, low cost migration of loops that is required by the TRO and is equivalent to the ease and efficiency with which customers are migrated today when changing long distance carriers and when CLPs use UNE-P.

This dependance on manual work renders the process prohibitively expensive, highly error prone, and not scalable to handle reasonable commercial volumes. As such, CLPs will remain impaired by any manual hot cut or loop migration process. Even the

best manual processes that could be operationalized today, including batch migration processes, cannot satisfy the requirements needed to eliminate the CLPs' operational impairment in attempting to compete for mass-market customers. Accordingly, this Commission should develop and approve a comprehensive process but should test and implement that process carefully to evaluate the extent to which CLPs remain impaired. At the same time, this Commission should encourage development of a process that automates the transfer of end-user loops. Any migration process that does not automate the transfer of end-user loops, eliminating the need for manual "hot cuts," cannot sustain competitively unconstrained migrations of customers among all carriers, both CLPs and ILECs alike. In order to establish and sustain competitively unconstrained migrations of customers among all carriers, an electronic process for loop provisioning must be made available which is as easy, efficient, and reliable as the UNE-P provisioning process for local customers and the PIC change methodology in place for long distance.

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Executive Summary
Direct Testimony of Don J. Wood

My testimony describes the framework for the type of economic impairment analysis discussed by the FCC in the Triennial Review Order ("TRO"). Specifically, I address the FCC's guidelines for an analysis of "economic impairment" suffered by Competitive Local Providers or CLPs for local circuit switching when providing competitive service to mass market customers.

Section I of my testimony covers my educational background and professional experience.

Section II, discusses the Commission's role as set forth by the FCC in the TRO in reviewing or conducting any analysis of "economic impairment".

Section III describes the guidelines prescribed by the FCC for an analysis of economic impairment and the factors which must be considered.

AT&T COMMUNICATIONS OF THE SOUTHERN STATES LLC'S
MATRIX SUMMARY OF REBUTTAL TESTIMONY
DOCKET NO. P-100, SUB 133q

February 16, 2004

WITNESS	SUBJECT MATTER OF REBUTTAL TESTIMONY	TRO DECISIONAL CRITERIA
Mark Argenbright	Analysis of DSO Cross-Over	47 C.F. R. §51.319(d)(2)(iii)(B)(4)
Jay M. Bradbury	Local Circuit Switching	47 C.F. R. §51.319(d)(2)(iii)(A)
Cheryl Bursh	Hot Cut Processes	47 C.F. R. §51.319(d)(2)(ii)
John Klick	Potential Deployment Analysis	47 C.F. R. §51.319(d)(2)(iii)(B)((3)
Mark Van de Water	Hot Cut Processes	47 C.F. R. §51.319(d)(2)(ii)
Don J. Wood	Economic Barriers to CLEC Entry	47 C.F. R. §51.319(d)(2)(iii)(B)

SUMMARY OF THE REBUTTAL TESTIMONY OF MARK E. ARGENBRIGHT ON BEHALF OF AT&T COMMUNICATIONS OF THE SOUTHERN STATES,LLC

The FCC, in its Triennial Review Order, directs States to determine a crossover point for use in delineating between mass market customers and enterprise customers. This crossover point is the point at which it becomes more economical to serve a customer using multiple analog loops with a DS1.

BellSouth has proposed a crossover point of three or fewer DS0 lines. This is inconsistent with the direction given by the FCC because it fails to consider the point at which it becomes more economical to utilize a DS1 rather than multiple DS0s.

CompSouth has proposed a general formula with which an appropriate economic crossover point can be calculated. AT&T, as a member of CompSouth, supports the straightforward analysis proposed by the CompSouth witness. This rebuttal testimony proposes a crossover point of nine DS0 lines. This crossover point is calculated in a manner consistent with the formula advanced by CompSouth and is supported by a model developed by Sprint for use in the Florida proceeding on this same matter. By populating the Sprint model with North Carolina specific inputs, the resulting calculation indicates that a crossover point of nine is appropriate for use in North Carolina.

SUMMARY OF THE REBUTTAL TESTIMONY OF JAY M. BRADBURY ON BEHALF OF AT&T COMMUNICATIONS OF THE SOUTHERN STATES,LLC

Docket No.: P-100, Sub 133q

FEBRUARY 16, 2004

AT&T's use of its local switches and network in North Carolina does not meet the requirements of the TRO for AT&T to be identified as a trigger in any BellSouth defined market. AT&T does not provide any mass market residential service. AT&T's universe of business customers served is 85% enterprise. The small number of very small business customers being served is an artifact of a prior failed business plan that will not be revived and that is not being used to provide service to new very small business customers. AT&T is not actively provisioning UNE-L service to very small business customers.

BellSouth has misrepresented the CLPs' actual deployment of local switches and networks in its direct testimony and failed to provide the Commission with the data to support BellSouth's claims.

BellSouth has compounded its failure to provide the data to support its claims by improperly asserting that the location of customers being served by both UNE-P and UNE-L, but particularly UNE-L, is irrelevant. Knowing where competition exists today using UNE-P, but would not exist in the future if UNE-P were made unavailable, is critical to the Commission's requirement to foster the on-going development and preservation of competition for local service.

BellSouth has overstated assumptions about the CLPs' ability to provide DSL services in a manner that may lead to the erroneous determination that entry in a given market is economically possible.

The impairment caused by the existing legacy network technology cannot be cured by improvements to the hot cut process, be they "batch", "bulk", or "rolling" processes. AT&T's Electronic Loop Provisioning proposal is capable of curing these deficiencies, but curing the continuing impairment that AT&T believes the Commission will find exists is not an issue in this proceeding. The Commission should open a separate docket to address how to eliminate the impairment it will find in this docket.

AT&T
Rebuttal Cheryl Bursch

TESTIMONY SUMMARY

My testimony responds to the Direct Testimony filed by BellSouth witness Alphonso J. Varner, and specifically demonstrates that:

* BellSouth's North Carolina performance data does not settle whether its existing processes can handle anticipated loop migration demand if UNE-P is eliminated.

* BellSouth's assessment of its loop performance data for North Carolina does not dispute that Competitive Local Providers ("CLPs") face operational barriers to market entry absent unbundled local switching (Unbundled Network Element Platform or "UNE-P").

* BellSouth's proposed changes to its Performance Assurance Plan fail to properly sanction poor performance in the batch hot cut process; even with them, key performance areas are excluded.

The current performance data reflects the fact that hot cuts and loop provisioning are at low levels. Because the different volume levels create two very different environments, how BellSouth handles hot cuts and loop provisioning in a low volume environment does not carry over to an environment with dramatic increases in volume. The FCC accurately pointed out that this data was irrelevant: "the issue is not how well the process works currently with limited hot cut volumes..." TRO at ¶ 469.

Data should also be evaluated with the appropriate standard. There is a greater likelihood of promoting competition if, in an environment without UNE-P, the performance experienced by the CLEC customer mirrors that of today's performance. Therefore, today's UNE Loop performance, specifically 2W Analog Loop with LNP, should be evaluated against today's UNE –P performance. The FCC supports this type of comparison in referencing that "[t]his review is necessary to ensure that customer loops can be transferred from the incumbent LEC main distribution frame to a competitive LEC collocation as promptly and efficiently as incumbent LECs can transfer customers using unbundled local circuit switching." TRO at fn. 1574.

In closing, it is essential that the proper review be performed in assessing performance data in order for the assessment to have any relevance in determining whether CLPs are impaired in an environment absent of UNE-P.

SUMMARY OF THE REBUTTAL TESTIMONY OF JOHN C. KLICK ON BEHALF OF AT&T COMMUNICATIONS OF THE SOUTHERN STATES, LLC

DOCKET NO. P-100, SUB 133Q

FEBRUARY 24, 2004

John C. Klick is Senior Managing Director of FTI Consulting, Inc.'s Network Industries Strategies group, with offices at 1201 I Street, N.W., Washington D.C. 20005. His Rebuttal Testimony responds to the Direct Testimony filed by James W. Stegeman and Debra J. Aron, on behalf of BellSouth Telecommunications, Inc. ("BellSouth") on January 9, 2004.

Section II of Mr. Klick's Rebuttal Testimony demonstrates that understanding and subjecting to critical scrutiny the BACE model calculations is a key task that the Commission, its Staff and the parties other than BellSouth must perform in this proceeding. By consciously designing the BACE model to keep key portions of its functionality from being reviewed, BellSouth has – at a minimum – made this task extremely difficult, if not impossible (particularly given the fast track procedural schedule set forth by the FCC and the state regulatory commissions). Without full access to the intermediate and final output tables created by the BACE model, the Commission and its Staff are prevented from comparing certain inputs and calculations with those made by other parties, making it impossible to effectively evaluate alternative evidence. BellSouth's failure to make available the intermediate and output tables created in BACE – and used in subsequent stages of the BACE calculations – is particularly inexcusable given AT&T's understanding (based on information received in Florida) that BACE employs a central database file that contains many of the intermediate and final results tables.

See Public Version of Rebuttal Testimony of Kent W. Dickerson before the Florida Public Service Commission, Docket No. 030851-TP, at page 7-8.

In short, by failing to produce the BACE computer code in a format that would permit the parties to make changes to that code, re-couple the BACE model and re-run it, such that it can be subjected to rigorous review by AT&T, this Commission or its Staff, BellSouth has failed to meet its burden of demonstrating that CLPs are not impaired in any market in North Carolina.[1]

Section III of Mr. Klick's Rebuttal testimony describes the results of the limited evaluation of certain aspects of the BACE model that he has been able to undertake to date, and notes that his work in this area continues. His evaluation of BACE has focused on three areas. First, he is critical of many of the inputs used in the model, most of which were provided by Dr. Aron. Second, he is critical of the way in which BACE performs its calculations of collocation costs. Third, he identifies other areas of the model that appear to have problems, although lack of access to the code and underlying tables has impeded the completion of his analyses in these areas. He notes that his review of BACE is ongoing, and that completion of this analysis is contingent upon fully accessing the model and code.

In the input area, he is critical of three types of inputs, *i.e.*, (1) the ultimate level of CLP penetration assumed by BellSouth in this proceeding, (2) the rapidity with which the BACE model assumes that this ultimate penetration will be achieved, and (3) the trends in retail prices assumed by BellSouth in this proceeding.

[1] Apparently Sprint requested an uncompiled version of the BACE source code in electronic format in the Florida proceeding. If the code is produced as Sprint requested, Mr. Klick intends to use it as permitted.

With respect to line count-based penetration, Mr. Klick concludes that in individual markets in North Carolina, an ultimate penetration rate for an efficient CLP that averages 4 to 5 percent, over the next 10 years, is more likely than the 15 percent assumed by Dr. Aron. Mr. Klick notes that assumptions in this area are critical to the business case analysis, because they affect the overall customer demand that a CLP will serve in each wire center and the revenues for the services and products that each of these customers will obtain from the CLP. Mr. Klick's Rebuttal testimony demonstrates that reducing the market share assumption dramatically reduces the NPV results inherent in BellSouth's BACE model. Specifically, a reduction in the ultimate market share from 15% to 5% reduces the net present value of the new entrant's mass market business case by approximately eighty-eight percent for North Carolina.

With respect to price trends, Mr. Klick concludes that BACE's assumption that retail prices will not decline over the 10 year study period is untenable. Any CLP considering the "investment decision" outlined by Dr. Aron in her Direct Testimony, *i.e.*, the decision to enter the local services market in North Carolina, could not responsibly evaluate that decision without assuming that retail prices will decline over time. Mr. Klick argues that Dr. Aron's reliance upon the language of the TRO to defend this assumption is neither accurate nor logical. The TRO clearly contemplates – in the context of its discussion of the business case analysis – that prices might decline over time in response to competition, and that it would be appropriate to take these anticipated price declines into account. Mr. Klick demonstrates that ignoring such price declines is inconsistent with the analysis of entry barriers that the FCC, and BellSouth itself, argue is properly includable in the context of the business case analysis. His Rebuttal Testimony demonstrates that if one assumes a reasonable level of retail price decline over time,

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say one percent per year, this reduces the mass market NPV calculated by the BACE model by twenty nine percent in North Carolina.

Finally, Mr. Klick's Rebuttal Testimony identifies several other areas of the model that appear problematic, although lack of access to the code and underlying tables has impeded the completion of those analyses. These include (1) the filters used to implement the filtering out of geographic areas that are not profitable; (2) the way the model recalculates and reallocates to the remaining customers costs that are fixed and attributable to the entire study market (for example, many of the costs associated with the single switch placed in the LATA) when groups of customers, wirecenters or geographic areas are excluded from the business case analysis; (3) the purchasing power and other operating cost assumptions (which implicitly assume that the level of CLP entry will be adequate to achieve the cost reducing effects of scale economies); (4) BACE's assumption that the CLP will be offering DSL services in markets where it establishes collocation, even though many of today's CLP UNE-P customers do not obtain DSL services from the CLP that provides local service using UNE-P; and (5) the assumption that the CLP business, including its assets, will be sold at the end of year 10 for a value equal to the net book value of the remaining assets (terminal value).

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Executive Summary
AT&T
Rebuttal Testimony of Mark Van de Water

My testimony refutes the claims of BellSouth's witnesses that their proposed batch process is capable of providing high quality, seamless migrations in sufficient volumes, and thus demonstrates that they do not remove the impairment that manual hot cuts create for Competitive Local Providers ("CLPs").

In its purported effort to comply with the Triennial Review Order ("TRO"), BellSouth offers the same manual provisioning process from the 271 case, along with a batch ordering process, both of which were created before, and make no effort to comply with, the TRO mandates that govern this case. BellSouth unabashedly ignores the findings of the Federal Communications Commission ("FCC") that rejected Incumbent Local Exchange Company ("ILEC") arguments regarding the relevance of 271 decisions and current performance measurement results to the TRO hot cut requirements. Moreover, it makes no effort to comply with the FCC's directive that the state commissions establish a batch hot cut process. Instead, despite a national finding of impairment, BellSouth maintains that nothing needs to be done to its existing individual hot cut process. While it dresses up that process by adding the "batch" tag to it, even BellSouth admits that its hot cut process is the same as it was before the FCC issued the TRO.

BellSouth also ignores the FCC's purpose for establishing a batch hot cut process, to reduce the economic and operational barriers posed by the present hot cut process. Instead, it offers the inadequate batch ordering/individual hot cut provisioning process to

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be used to migrate the embedded base of Unbundled Network Element Platform ("UNE-P") in the event of a finding of no impairment. And, while BellSouth promises it will achieve the anticipated increase in volumes, I have numerous concerns about un-addressed issues I describe in more detail later in my testimony. BellSouth's feeble proposal exacerbates the "haves" and "have nots" environment that removal of unbundled switching would create: CLPs will be handicapped by a manual, high-cost process for their customers while BellSouth enjoys an electronic, low-cost process for most of its customers.

BellSouth also ignores that its performance for hot cut migrations is inferior to UNE-P migrations for ordering and provisioning, forcing CLPs and their customers to inferior and inefficient service if unbundled local switching is no longer available as an option. Finally, BellSouth ignores the basic reality that its "batch" ordering process excludes customers who obtain Digital Subscriber Line ("DSL") services via a line-splitting arrangement and those who would like to move from one CLP to another.

In short, BellSouth's batch process falls short in a number of key aspects of the TRO's mandates regarding the hot cut process.

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